SECOND

REGIONAL WORKSHOP

ON

# ESSENTIAL DRUGS IN PRIMARY HEALTH CARE

A REPORT

(21-22 February, 1990)

National Institute of Public Cooperation and Child Development
5, Siri Institutional Area, Hauz Khas, New Delhi-110016

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VENUE: K.G. Medical College, Lucknow

NATIONAL INSTITUTE OF PUBLIC COOPERATION AND CHILD DEVELOPMENT
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## CONTENTS


| | | Page Nos. |
|---|---|---|
| SECTION I | INTRODUCTION | 1-4 |
| SECTION II | OBSERVATIONS AND RECOMMENDATIONS | 5-16 |
| SECTION III | DISCUSSION PAPERS | 17-57 |
| | Review of Morbidity and Mortality Profile of Uttar Pradesh (West) and Requirements of Essential Drugs in Primary Health Care<br>- J.V. Singh, Meerut<br>- Dinesh Paul | 17-32 |
| | Review of Morbidity and Mortality Profile of Uttar Pradesh(East) and Requirements of Essential Drugs in Primary Health Care<br>- J.V. Singh, Lucknow | 33-38 |
| | Review of Morbidity and Mortality Profile of Madhya Pradesh and Requirements of Essential Drugs in Primary Health Care<br>- V.B. Saxena | 39-50 |
| | A View about Drugs and Medicines to be Used in the Rural Health Care Delivery System<br>- S.C. Tiwari | 51-57 |

ANNEXURES

| | | |
|---|---|---|
| I. | List of Participants | i-v |
| II. | Programme Schedule | vi-viii |
| III. | List of Kit Material | ix |
| IV. | List of Essential Drugs (Recommendations of National Seminar) | x-xii |

# SECTION 1

# INTRODUCTION

# INTRODUCTION

The National Institute of Public Cooperation and Child Development had organised a National Seminar on 'Essential Drugs in Primary Health Care in India' in collaboration with the National Institute of Health and Family Welfare in September 1988. The seminar evolved a model list of essential drugs required at various levels of primary health care. It was also recommended that the drugs provided at Primary Health Centres and sub-centres should be reasonably priced and these should be available with them throughout the year. The State Governments could draw appropriate lists of essential drugs for use in their States, keeping in view the morbidity profile of the population. The need for making adequate budgetary allocations for the purpose of replenishing the kits of AWWs, Health Guides, PHCs and Sub-centres was also stressed.

It was also observed at the seminar that the quantity of drugs may depend on the morbidity pattern, seasonal trends and sickness load. Ensuring availability of requisite drugs, therefore, calls on regular monitoring and evaluation besides in-service training of manpower in judicious use of these drugs. The Ministry of Health and Family Welfare in preparing a tentative list of medicines for CHCs, PHCs, Sub-centres and Health Worker has taken into consideration the drugs included in the model list prepared by the National Seminar.

During the discussions in the seminar, it was felt that there was a need to prepare comprehensive list of essential drugs indicating their quantity within the budget provisions for each state of the country, keeping in view the morbidity and mortality profile of the population in a State. The model list suggested by the seminar could be used as a reference list for preparing the list of essential drugs for each state. This could be done by organising regional workshops.

In view of the above, the Institute organised the first Regional Workshop on 'Essential Drugs in Primary Health Care' from 7 to 8 December 1989 at its premises in New Delhi for the states of Jammu & Kashmir, Rajasthan, Punjab, Haryana, Gujarat, Himachal Pradesh and Union Territories of Delhi and Chandigarh. The Institute organised Second Regional Workshop from 21 to 22 February 1990 at K.G's Medical College, Lucknow with their cooperation.

Objectives

The main objectives of the workshop were:

(i) to sensitize the state level policy makers and administrators towards evolving and further refining a rational drug programme in view of their key role in developing a Primary Health Care strategy;

(ii) to evolve a list of essential drugs indicating the quantity required keeping in view the morbidity profile of each state and the budgetary allocations for sub-centres and PHCs; and

(iii) to consider the ways and means of ensuring necessary follow-up action for the implementation of recommendation of the workshop.

Participants

About 40 participants comprising senior officials from concerned Departments of Centre and State Government, Community Medicine Specialists, Pediatricians, Gynaecologists and Obstetricians and other Subject Matter Specialists and representatives of voluntary Organisations and UNICEF participated in the workshop. The workshop covered the States of Uttar Pradesh and Madhya Pradesh. A list of the participants is at Annexure I.

Opening Session

The workshop was inaugurated by Prof. B.K. Khanna, Principal, K.G's Medical College, Lucknow. Dr S.P. Jain, Regional Director, National Institute of Public Cooperation and Child Development, Lucknow welcomed the Chief Guest and the participants of the workshop. Dr Dinesh Paul, Deputy Director (Health), NIPCCD, New Delhi gave a brief outline of the workshop and spelt out its objectives. While inaugurating the workshop Prof. B.K. Khanna emphasised that the drugs provided at the Primary Health Centres and sub-centres should be available throughout the year, keeping in view the major health problems of the community such as, water borne diseases, respiratory infections, malaria, filaria, kalazar etc. He stressed that some drugs are available without medical prescription and this practice should be immediately stopped.

He emphasised the need for inculcating the habit of hygiene in the community through peripheral health workers like Anganwadi Workers, Health Guides, Health Workers etc. in addition to provisions of essential drugs required for treatment of minor ailments. Training of health workers in proper usage of essential drugs was also stressed. He highlighted the development of resistance of disease agents towards various drugs.

In the end Dr. J.V. Singh, Reader, Department of Social and Preventive Medicine, K.G's Medical College, Lucknow and Coordinator of the workshop proposed vote of thanks.

Plenary Session

The participants met in five plenary sessions and discussed the following themes after presentation of papers specially commissioned from various experts and specialists:

(i) Review of Morbidity and Mortality Profile of Madhya Pradesh and Recuirements of Essential Drugs in Primary Health Care.

(ii) Review of Morbidity and Mortality Profile of Uttar Pradesh (East) and Requirements of Essential Drugs in Primary Health Care.

(iii) Review of Morbidity and Mortality Profile of Uttar Pradesh (West) and Requirements of Essential Drugs in Primary Health Care.

(iv) A view about Drugs and Medicines to be used in Rural Health Care Delivery System.

(v) Drug Supply System in Madhya Pradesh.

In each session a discussion paper was presented by the expert, followed by discussion among the participants. The discussion papers are included in Section III of the Report. The Programme Schedule of the workshop is at Annexure II.

Workshop

On the final day, the participants discussed and finalised the observations and recommendations. The observations and recommendations have been given in section II of the report.

Concluding Session

The concluding session of the workshop was chaired by Dr. S.P. Jain, Regional Director, NIPCCD. Dr Dinesh Paul, Workshop Director presented a brief report on the workshop. Dr. J.V. Singh, Rapporteur (Group A) and Dr. P.L. Joshi, Rapporteur (Group B) presented the Observations and Recommendations of the both groups.

The following pages contain the main observations and recommendations of the workshop and discussion papers.

# SECTION II

# OBSERVATIONS AND RECOMMENDATIONS

## OBSERVATIONS AND RECOMMENDATIONS

The observations and recommendations of the workshop are as follows:

### I. Essential Drugs for the Kit of Anganwadi Workers/ Village Health Guide

The participants reviewed the list previously prepared by the national seminar on the subject. Which is at Annexure IV. The following points were made:

(i) Availability of bronchodilater at the health worker level was suggested, debated for its safety, vis-a-vis ephedrine. It was not accepted for its inclusion at this level because of variable morbidity related to asthma and because it is not so acute and life threatening condition. Salbutamol was, however, recommended for inclusion at the subcentre level.

(ii) Deletion was recommended for Zinc Sulphate drops as it is not a useful drug.

(iii) Name 'Terramycin', which is a trade name, should be changed to 'oxytetracycline' eye ointment.

(iv) Three skin-antiseptics were considered superfluous. Removal of acriflavine powder was recommended.

(v) Inclusion of two anthelmintics were not considered favourable. It was decided that only in hookworm endemic areas of the region Bephenium Hydroxy-naphthoate may be included. Otherwise mebendazole is e enough.

(vi) Should antacid be included? It was discussed but not recommended.

(vii) Deletion of chlorine Tablets and chloroquine tablet was suggested and accepted.

II. Essential drugs for the Subcentre

The participants reviewed the national list of drugs for the subcentre prepared by National Seminar on the subject and recommended the following for addition:

(i) Salbutamol
(ii) Cetrimide Solution

III. Drugs for Primary Health Centre

The following modifications were suggested in the National list of Drugs for PHC prepared by National Seminar on the subject:

(i) Chlorthiazide was recommended for replacement by frusemide tablets. The later is cheaper, more effective and safer.

(ii) The drug list proposed by WHO (1977) was reviewed. The following additional drugs were recommended for inclusion:

a. Oxygen
b. Atropine ointment
c. Syp. Paracetamol
d. Syp. Amoxycillin
e. Antispasmodic Tablets (Scopolamine)
f. Inj. Ca-gluconate
g. Inj. Dilantin
h. Nalidixic Acid Syp. and Tablets - for Dysentery (Shigellosis) in the region. Shigellosis is resistant to other antibiotics and it should be reviewed periodically.

(iii) Deletion of Dihydrallazine tablet was suggested.

(iv) Inj. Insulin soluble and PZI for Juvenile Diabetics was suggested as oral anti-diabetics are not useful for Juvenile Diabetes.

(v) Inj. Pentazocine and Inj. Dopamine were also added in the list of P.H.C.

## IV. Proposed Revised List of Essential Drugs

After considering the modifications suggested by the participants the following list of Essential Drugs for the region was proposed.

### (i) Essential drugs Suggested for the kit of Anganwadi Worker/Village Health Guide

1. Vitamin A solution
2. Iron and folic acid tablets
* 3. ORS packets
* 4. Paracetamol tablets
5. Mebendazole tablets
6. Chlorpheniramine maleate tablets
7. Mercurochrome powder
8. Gentian violet granules
9. Borospirit ear drops
10. Oxytetracycline eye ointment
11. Oxyphenonium bromide tablets
12. Benzyl Benzoate emulsion
*13. Cotrimoxazole tablets

### (ii) Essential drugs at the sub-centre

a. Drugs suggested for the anganwadi worker/village health guide

b. Additional drugs:

14. Aspirin
15. Salbutamol

16. Metoclopramide
17. Contraceptive pills
18. Chlorhexidine solution
*19. Tablet and injection methergin
20. Chloroquine tablets

(iii) Essential drugs at the primary health centre

a. Drugs listed for subcentre
b. Additional drugs:

21. Aluminium Hydroxide Tablets
22. Amoxycillin Capsule and Soluble tablets
23. Doxycycline Capsule
24. Chloramphenicol Capsule and Syrup.
25. Penicillin (Procaine & Benzathine)
*26. Digoxin tablets
*27. Propranolol tablets
28. D.E.C. tablets (Diethyl Carbamazine)
*29. Isosorbide dinitrate tablets
30. Phenobarbitone tablets (30 mg. 60 mg.)
31. Promethazine syrup & tablets
*32. Glibenclamide tablets
33. Amitriptyline tablets
34. Furazolidine tablets
35. Metronidazole tablets
36. Theophylline tablets
37. Antispasmodic tablets (Scopolamine)
38. Chlorpromazine tablet
39. B Complex tablet
40. Vitamin D
41. Diazepam
42. Anti-tubercular drugs
(Available under NTCP)

43. Anti leprosy drugs (available under NLEP)
44. Tablet and Syrup Nalidixic acid
45. Primaquin tablets
46. Sulphadoxine & pyrimethamine tablets
47. Cap. Gynae CVP
48. Isoxsuprine hydrochloride tablet
49. Povidone iodine vaginal pessary
50. Tablet prednisolone
51. Atropine 1% Eye drops and ointment
52. Homatropine 2% eye drops
53. Pilocarpine nitrate 2% eye drops
54. Hydrocortisone eye ointment
55. Frusemide tablet
*56. Antisnake venom
57. Tincture iodine
58. Whitfield's ointment
59. Lidocaine 4%, 2% and jelly
*60. Inj. Aminophylline
*61. Inj. Adrenaline
*62. Inj. Dexamethasone/hydrocortisone
63. Inj. Chlorpheniramine maleate
*64. I.V. Fluids (Ringer lactate, 5% dextrose, 5% dextrese saline, 33% Saline)
*65. Inj. Normal saline
*66. Inj. Atropine
*67. Inj. Potassium chloride
*68. Inj. Sodium bicarbonate
*69. Inj. Frusemide
*70. Inj. Morphine/Pethidine
*71. Inj. Diazepam
*72. Inj. Oxytocin
*73. Vaccines DPT, OPV, Measles, Tetanus toxoid
74. BCG, TT, DT and Antirabies vaccine

*75. Oxygen
*76. Inj. Ca-gluconate
*77. Inj. Dilantin
*78. Inj. Insulin and PZI
*79. Inj. Pentazocine
*80. Inj. Dopamine

* These drugs should never be out of stock.

V. Some Important Guidelines for Drug Use

1. The quantity shall depend on the morbidity pattern/seasonal trend/sickness load. This should also include the regular monitoring and evaluation besides inservice training of manpower regarding judicious use of these drugs and for this effective training modules and charts should be developed in the local languages together with effective use of the existing training modules.

2. It is vital that relavent information about all essential drugs be provided in local language to all the workers at Anganwadi, Sub-centre and P.H.C. level. This is essential to ensure satisfactory therapeutic standards to promote rational prescribing.

3. The use of each drug with adequate information and knowledge about its common indications, contraindications, side-effects and remedies thereof is safe.

4. Some drugs are available over the counter without medical prescriptions. These products are intended for self-medication. Whenever a product is likely to be used unsupervised by consumers, it is imperative that adequate information be provided in a that can be understood by consumers and that, whenever

appropriate, clear diagnostic criteria be provided for each indication. Information can be channelled through pamphlets, mass media and posters. These educational programmes must be created and designed with the help of Government and local voluntary agencies working in the field at Consumer Education and Health Education.

5. Dr Saxena from M.P. highlighted the problems of the tribal population of his state. The workshop felt that special attention must be given to PHCs of M.P. tribal areas with more research work and intensive medical care for Yaws, V.D. and other rare skin diseases. It may be offered on top priority basis if a social change is contemplated.

## VI. The Quantity of Drugs Needed for Population of 1000

### (i) Non Emergency Drugs

The following are the quantity of drugs needed for a population of 10000

| | | Amount Needed for 1000 Population |
|---|---|---|
| 1. | O.R.S. packets (1 litre) | 300 |
| 2. | Cotrimoxazole tablets | 1000 |
| 3. | Paracetamol tablets | 2000 |
| 4. | DPT | 14 vials (10 dose/vial) |
| 5. | Polio | 8 vials (20 dose/vial) |
| 6. | B.C.G. | 2 vial (20 dose/vial) |
| 7. | Measles | 4 vials (10 dose/vial) |
| 8. | Iron & Folic Acid (for pregnant mothers) | 6000 tablets |
| 9. | Vitamin A solution | 6 bottles (Each bottle having 60 doses) |
| 10. | Mebendazole tablets | 1000 |
| 11. | Oxytetracycline eye ointment | 250 tubes |
| 12. | Metoclopramide tablets | 500 |
| 13. | Chlorpheniramine Maleate tablets | 700 |
| 14. | Theophylline tablets | 300 |
| 15. | Salbutamol tablets | 300 |
| 16. | Injection Methergine | 30 amp |
| 17. | Tablet Methergine | 450 |

(ii) Emergency Drugs

The emergency drugs should be available at any given point of time for managing at least five cases at P.H.C. The following are the minimum requirements of emergency drugs.

| | | |
|---|---|---|
| 1. | Aminophylline injections | 20 amp |
| 2. | Adrenaline injections | 10 amp |
| 3. | Dexamethasone injections | 5 vials |
| 4. | Injection CPM | 2 amp |
| 5. | Ringer Lactate (500 ml bottle) | 15 |
| 6. | 5% Dextrose Solution (") | 15 |
| 7. | Normal Saline (") | 15 |
| 8. | 5% Dextrose Saline (") | 10 |
| 9. | 33% Saline | 2 |
| 10. | Inj. Atropine | 5 amp |
| 11. | Inj. Frusemide | 5 amp |
| 12. | Inj. Diazepam | 10 amp |
| 13. | Inj. Morphine/Pethidine | 5 amp |
| 14. | Inj. Oxytocin | 20 amp |
| 15. | Oxygen | |
| 16. | Inj. Dopamine | 2 vials |
| 17. | Inj. Pentazocine | 5 amp |

The stock of emergency drugs should be replenished every month.

VII. Proposed Budget

| Population Size | Level of Care | Minimum Amount* per year for drugs |
|---|---|---|
| 1000 | Anganwadi Worker | Rs. 1,000/- |
| | Health Guide | Rs. 1,000/- |
| 5000 | Sub-centre | Rs. 5,000/- |
| 30000 | P.H.C. | Rs.30,000/- |

*This budget is exclusive of the drugs that are being currently supplied through the various National Health Programmes such as U.I.P., NTCP, NLEP, NMEP etc. A contingency provision of a minimum of Rs. 1,000/- at any given time should always be available with each medical officer at the PHC for natural calamities, epidemics and unforseen emergencies.

VIII. Management of Drug Supply System

The group discussed the drug supply system of U.P. and M.P. in detail. It also discussed the system of supply of essential drugs at the following levels:

(i) AWW/VHG level
(ii) Sub-centre level and
(iii) PHC level

(i) AWW/VHG Level

It was recommended that prepacked kits containing standard essential drugs (containing 3 months supply) should be supplied to AWW by the department of Social Welfare through District Programme Officer and the same should be done by District Health Officer/CMO

for village health guides through MOI/c PHC. It was recommended that the periodicity of drug supply from CMO to PHC level should be on half-yearly basis and from the PHC to VHG on quarterly basis.

(ii) Sub-centre Level

It was felt that the prepacked kits containing essential drugs for sub-centre (having 3 months supply) should be supplied to sub-centre by District HO/CMO through M.O.I/c PHC. The periodicity of supply at this level from CMO to PHC should be on half-yearly basis and from PHC to sub-centre on quarterly basis.

(iii) PHC Level

A standard list of essential drugs with their quantity be prepared for PHC and the drugs should be purchased according to this list. The periodicity of supply should be once in a quarter at PHC level through CMO/DHO. (The stock of emergency drugs should be replenished every month). The order for supply of these drugs should be placed at the Directorate/ Central level. Some budget should be placed at CMO/ District HO level/M.O.I/c PHC level for the purchase of drugs as per requirement of PHCs or for those drugs which have not been supplied by Directorate/ Central level.

(iv) Feedback

A card containing the list of essential drugs should be prepared for each level i.e. AWW/VHG, MPW and PHC. The workers at each level should send back the card at the end of the quarter to their immediate

(v) Quality Control

Quality of the drugs to be supplied should be ensured. Drug Inspector from Drug Controller Department must be associated with the District level committee for quality control with CMO/DHO. Any adverse reaction due to drug should be properly investigated and reported to higher authorities.

IX. Follow Up Action for Implementation

Organisation at the State level should be there for better coordination and implementation. This can be done by the Ministry of Health by formation of a State Level Committee.

(i) State Level Committee on Essential Drugs

| | | | |
|---|---|---|---|
| DGHS | - | Chairman | |
| JD(CMSD) | - | Convener | |
| Addl. Director of Health Services(DHS) Zonal level | - | 1 | By rotation |
| State Drug Controller | - | 1 | Member |
| CMO/Distt. Health Officer | - | 2 | By rotation |

Frequency of Meeting: Once in a year

(ii) District Level Committee on Essential Drugs

| | |
|---|---|
| Addl. Director/Chief Medical Officer/ D.H. Officer | - Chairman |
| Chief Pharmacist | - Convenor |
| District Drug Inspector | - Member |
| 2 Medical Officers from PHCs by rotation | - Members |

Frequency of Meeting : Once in 6 month

These committees should review the recommendations of of the workshop and ensure proper implementation of the recommendations.

# SECTION - III

# DISCUSSION PAPERS

# Review of Morbidity and Mortality Profile of Uttar Pradesh(West) and Requirements of Essential Drugs in Primary Health Care

- U.V. Singh*
- Dinesh Paul**

The use of Primary Health Care approach towards achieving 'Health for All by the year 2000' is now well established. A large number of paramedical personnel and community health workers are playing an important role in the delivery of Primary Health Care with emphasis on health promotion and disease prevention. However, the treatment of minor illnesses with the use of simple drugs is essential to gain the confidence of the community and hence aptly included under the contents of Primary Health Care.

Essential drugs are those drugs that satisfy the health care needs of the majority of the population. These should, therefore, be available at all times in adequate amount and appropriate dosage forms. The choice of such drugs depends on many factors, important being, (1) pattern of prevalent diseases (2) availability of treatment facilities (3) training and experience of health personnel and (4) financial resources.

In the present paper an attempt has been made to analyse these factors with a view to sensitizing state level policy makers and administrators towards evolving rational drug programme for primary health care strategy in Uttar Pradesh (West).

Uttar Pradesh(West): It is difficulty to define what would constitute Uttar Pradesh(West). However, for the purpose of this paper any area which is west to the capital regiona. of Lucknow has been taken as UP(West), which includes seven commissionaries, i.e. Meerut, Muradabad, Baraily, Garwal,

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Nainital, Agra and Jhansi (Fig-1)P-29. The remaining commissionaries Kanpur, Gorakhpur, Faizabad, Allahabad, Varanasi and also Lucknow can be called as UP(East), UP(West) thus includes two Commissionaries which are mainly hilly areas i.e. Garhwal and Nainital. Thus it can be seen that UP(West) in itself has varied topography and physiography. However, Meerut being the central place can be taken as representative of the whole region to a large extend and hence the paper deals mainly with the disease patterns of Meerut region in detail.

A. Morbidity Pattern in UP(West)

(i) General: A few cross-sectional studies have been carried out in UP(West) to find out morbidity in the general population and their findings are given in the following table 1.

Table 1

Prevalence of Morbidity in UP(West)

| Age of study | Author | Morbidity percent |
|---|---|---|
| Aligarh(Rural) | Yunus(1978) | 83.0 |
| Meerut(Urban) | Bhatnagar et al(1981) | 25.9 |
| Meerut(Rural) | Garg et al (1982) | 33.8 |

It is clear from the table that the morbidity ranges from 25 to 83 per cent, depending on the area and type of population studied.

The important causes of morbidity as encountered in these studies have been: GIT diseases, respiratory infections, skin diseases, eye diseases and fever(Yunus 1978, Bhatnagar et al 1981, Garg et al, 1982 and Garg et al 1984).

(ii) Morbidity Pattern in an Area of UP(West): The above studies do give some idea of the morbidity pattern of the area. However, to investigate the pattern in detail a study has been done in a population of 7400 in PHC Machhra(Meerut), during the year 1989 and the pattern of morbidity which reported for treatment at the Primary Health Care level is shown in table 2 and Fig. 2.

Table 2

Morbidity pattern at P.H.C. level (year 1989)

Population = 7400

| Diseases | Morbidity percent of total | Total morbidity percent |
|---|---|---|
| a. Respiratory diseases | | |
| (i) URTI and coryza | 73.6 | |
| (ii) Bronchitis (Acute & Chronic) | 17.6 | |
| (iii) Bronchial Asthma | 3.8 | 29.8 |
| (iv) Pneumonia | 0.9 | |
| (v) Others | 4.1 | |
| b. G.I. Tract diseases | | |
| (i) Diarrhoea & Dysentery | 60.9 | |
| (ii) Worm infestation | 28.2 | 28.5 |
| (iii) Dyspepsia | 7.7 | |
| (iv) Constipation | 1.2 | |

| | | | | |
|---|---|---|---|---|
| c. | Skin Diseases | | | |
| (i) | Boils/Furuncles | 56.8 | | |
| (ii) | Scabies | 25.8 | | 12.0 |
| (iii) | Fungal infections | 4.5 | | |
| (iv) | Allergy/Dermatitis | 8.9 | | |
| d. | Fever | | | |
| (i) | Viral | 33.3 | | |
| (ii) | Malaria | 47.5 | | 7.8 |
| (iii) | P.U.O. | 19.2 | | |
| e. | Aches/pains | | | |
| (i) | Arthritis | 37.7 | | |
| (ii) | Body ache/Backache/ Myalgia | 45.9 | | |
| (iii) | Tooth ache | 8.5 | | 7.2 |
| (iv) | Head ache | 7.9 | | |
| f. | Eye diseases | | | |
| (i) | Conjunctivitis | 86.2 | | |
| (ii) | Trachoma | 11.8 | | 6.5 |
| (iii) | Others | 2.0 | | |
| g. | Ear diseases | | | |
| | C.S.O.M. | 100.0 | 2.5 | |
| h. | Injury | 100.0 | 1.8 | |
| i. | Nutritional problems | | | 8.2 |
| (i) | Anaemia | 64.3 | | |
| (ii) | Stomatitis | 35.7 | 1.3 | |
| j. | A.N. Case | 100.0 | 1.0 | |
| k. | Others | 100.0 | 1.6 | |

NOTE: Episodes reported for treatment - 5719
Referred cases - 3% of total

The figure states that the causes of morbidity in order of priority are respiratory disease, G.I.T. diseases, skin diseases, fevers, aches/pains and Eye diseases.

(iii) Morbidity pattern andutilisation of health services: Table 2 shows the findings of a prospective study carried out from January to December 1989. The whole population was followed for one year and the disease prevalence rates/1000 population have been computed. The percentage of people opting for treatment through any governmental agency for any specific illness has also been computed.

Table 3

Type of Morbidity and Utilization of PHC services

| S.No. | Type of sickness | Prevalence/1000 population | Percent taking treatment |
|---|---|---|---|
| 1. | Respiratory diseases | 268.9 | 75.0 |
| 2. | G.I.T. diseases | 219.5 | 77.6 |
| 3. | Skin diseases | 108.0 | 72.6 |
| 4. | Fever | 75.5 | 72.1 |
| 5. | Eye diseases | 75.4 | 50.0 |
| 6. | Aches & pain | 61.4 | 85.5 |
| 7. | A.N.C. | 24.8 | 37.4 |
| 8. | Nutritional | 20.1 | 64.4 |
| 9. | Injury (minor) | 20.0 | 45.2 |
| 10. | Ear infections | 14.3 | 41.5 |
| 11. | Others | 44.1 | 40.8 |
| | Total | 931.9 | 61.4 |

The important causes of morbidity were again the same as that seen in figure-2 (P.-30) but the most compelling disease/symptoms for treatment have been aches & pains, G.I.T. diseases, respiratory diseases, skin diseases and fever. The overall sicknesses needing attention at PHC level were found to be about 60 per cent.

In a similar study conducted by Paul (1983) in the same area the utilization of health services by community leaders was found to be only 40 per cent.

(iv) Morbidity pattern and several variation: An analysis of records of patients taking treatment at Primary Health Care level showed a definite seasonal variation as shown in Table 4.

Figure - 3 The variations have been shown as per quarters of the year (P.31).

Table 4

Seasonal variation in morbidity at PHC level

| Cause of Morbidity | Quarters | | | | Total percent |
|---|---|---|---|---|---|
| | I | II | III | IV | |
| 1. Respiratory diseases | 27 | 19 | 20 | 34 | 30 |
| 2. G.I.T. diseases | 13 | 28 | 38 | 21 | 29 |
| 3. Skin diseases | 12 | 17 | 50 | 21 | 12 |
| 4. Fever | 9 | 18 | 59 | 14 | 8 |
| 5. Eye diseases | 25 | 56 | 10 | 9 | 6 |
| 6. Aches/pains | 25 | 24 | 35 | 16 | 7 |
| 7. Others | 16 | 33 | 23 | 28 | 8 |
| Total | 16 | 25 | 38 | 21 | 100.0 |

(Note: Figures are given in percentages)

The maximum number of patients reported for the treatment in the third quarter followed by the second. The diseases of the respiratory system were maximum inthe fourth quarter while that of G.I.T., skin, fever and Aches/pains were maximum in the third quarter. Eye disease were seen more in IInd quarter of the year.

(v) Morbidity pattern by age group: Approximately 60 per cent of all the sickness needed medical attention at PHC level through governmental organisation. The age of treatment seekers is a very important component while deciding on to the quantity of drugs to be supplied. Morbidity by age is shown in Figure-4. (P-32)

In the maximum number of conditions the treatment seekers were children except in aches/pain where adults above 15 years out numbered children. Pyrexia had an equal distribution of treatment seekers. Over all 60 per cent of treatment seekers were children below 15 years.

## B. Mortality Pattern

No, reasonable data could be gathered regarding causes of mortality in general population. However, in adults the most important cause as encountered in many studies was senility. In children the important causes of death were infective and parasitic diseases (40%) andrespiratory disease (15%) as reported by Garg et al (1984).

## C. Medication Versus Standing Orders

In a very interesting study Paul (1983) studied the medication of sick and injured by ANMs versus standing orders. The findings of which are given in the following table

Table 4

Medication of sick and injured persons by ANMs Vs standing orders

| Standing order | Percent |
|---|---|
| Correct drug Correct dose | 55.9 |
| Correct drug Incorrect dose | 14.2 |
| Wrong drug | 7. |
| Failed to treat | 20.7 |
| On doctor's order | 0.9 |

The fact that serial number 2 and 3 collectively constitute 21.5 per cent indicates that nearly one out of five patients was either being wrongly treated or being given inadequate treatment by trained ANMs. which is a shocking revealation. The need for proper inservice training, therefore, should not be underestimated and requires serious consideration.

D. Essential drugs required for Primary Health Care

Keeping in view the morbidity pattern, utilisation of health services, standard treatment (subject to agreement) and are of the patients the following requirements of the essential drugs for 1000 population in UP(West) has been worked out. (By Morbidity Method WHO 1988)

Table 5

Essential Drugs recommended for 1000 population in a year in UP (West) at VHG/AWW level

| Sl.No. | Name of drug | Quantity needed | Cost in Rs. |
|---|---|---|---|
| 1. | Benzyl Benzoate (25%) | 2x1000 ml | 80/- |
| 2. | Calamine lotion | 10x100 ml | 50/- |
| 3. | Chloroquine tab. (200 mg) | 2x100 | 70/- |
| 4. | Chlorpheniramine tab. (4 mg) | 5x100 | 15/- |
| 5. | Chlorhexidine/Cetrimide sol. (20%) | 2x1000 ml | 60/- |
| 6. | Co-trimoxazol tab. (480 mg) | 5x100 | 250/- |
| 7. | Ephedrine tab. (30 mg) | 1000 | 85/- |
| 8. | Gentian Violet (0.5%) | 3x25 G | 90/- |
| 9. | Ispaghula/senna tab. (7.5 mg) | 20 pkt/100 tab | 100/- |
| 10. | Iron and folic acid tab | 3x1000 | 210/- |
| 11. | Magtrisilicate/Al hydroxide tab (500 mg) or sodabicarb tab (500 mg) | 200 tabs | 20/- |
| 12. | Mebendazole (1000 mg) or Piperazine (500 mg) | 200/300 | 100/- |
| 13. | Metronidazole tab (400 mg) | 200 | 60/- |
| 14. | ORS | 1000 pkts | -- |
| 15. | Paracetamol tab (500 mg) | 2000 | 250/- |
| 16. | Tetracyclin eye oint | 50 tubes | 60/- |
| 17. | Whitfield oint (BA 6% SA 3%) | 2x500 g | 80/- |
| 18. | Vit. B complex/ yeast | 5x100 | 50/- |
| 19. | Vit. A solution | 10x60 doses | -- |
| | Total cost | | Rs. 1630/- |

In addition to the drugs available in AWW kit/CHW kit the following drugs should also be made available at subcentre level

1. Aspirin tab(300 mg)
2. Tab and Inj. Methargine
3. Tab Metochlopramide (10 mg)
4. Tab Primaquin (7.5 mg)

The requirements for other health services contact like immunization, antenatal care and family welfare are being worked out already and beingsupplied. This is to be maintained.

The Primary Health Centre should be able to deal with most of the common emergencies and referred cases apart from those patients who reach there directly for PHC care treatment. Hence the PHC which is manned by qualified doctors should have facilitaties for emergency care/treatment of complicated cases as well as drugs recommended earlier.

E. Proposed Budget

The approximate cost of essential drugs, as can be seen from Table 5, comes out to be Rs.1600/1000 of population. Keeping in view the other drugs requirements of sub centres and PHC centre, the overall cost can be computed as Rs.2000/1000 of population i.e. Rs.2/- head. This budget is not inclusive of the drugs, that are being currently supplied through various National Health Programme.

The cost of drugs thus for a PHC of 30,000 population comes out to be Rs.60,000/- per year. The proposed distribution of money has been shown in Table 6.

Table 6

Proposed budget for drugs for PH care

| Level of care | Population served | Amount for drugs per year |
|---|---|---|
| Anganwadi Worker | 1000 | Rs.600/- x 30 |
| V.H. Guide | 1000 | Rs.600/- x 30 |
| Sub centre | 5000 | Rs.2000/- x 6 |
| PH Centre | 30000 | Rs.12,000/- x 1 |
| Total | 30,000 | Rs.60,000 |

F. Suggestions

For rational requirement and supply of essential drugs that following suggestions are made:

(i) A system of reporting morbidity from PH.centres to C.M.O. should be developed. This would keep C.M.O. office a breast with latest changes in the morbidity pattern of the area.

(ii) The purchase of drugs can be made at three levels (a) Central level (b) Zonal or regional level and (c) District level. A proportionate amount of budget be allotted to these levels.

(iii) The periods of supply of drug should be at least twice in a year at CHG/AWW/ level and once in three months to SC/PHC level. While supplying the drugs the seasonal variations in morbidity should also be kept in mind.

(iv) Periodic supervision of workers using drugs in the field should be done and it should be supplemented by periodic inservice orientation training courses.

## References


1. Bhatnagar et al (1981) Morbidity differentials and morbidity in the urban area of Meerut city. IJCM VI(1).

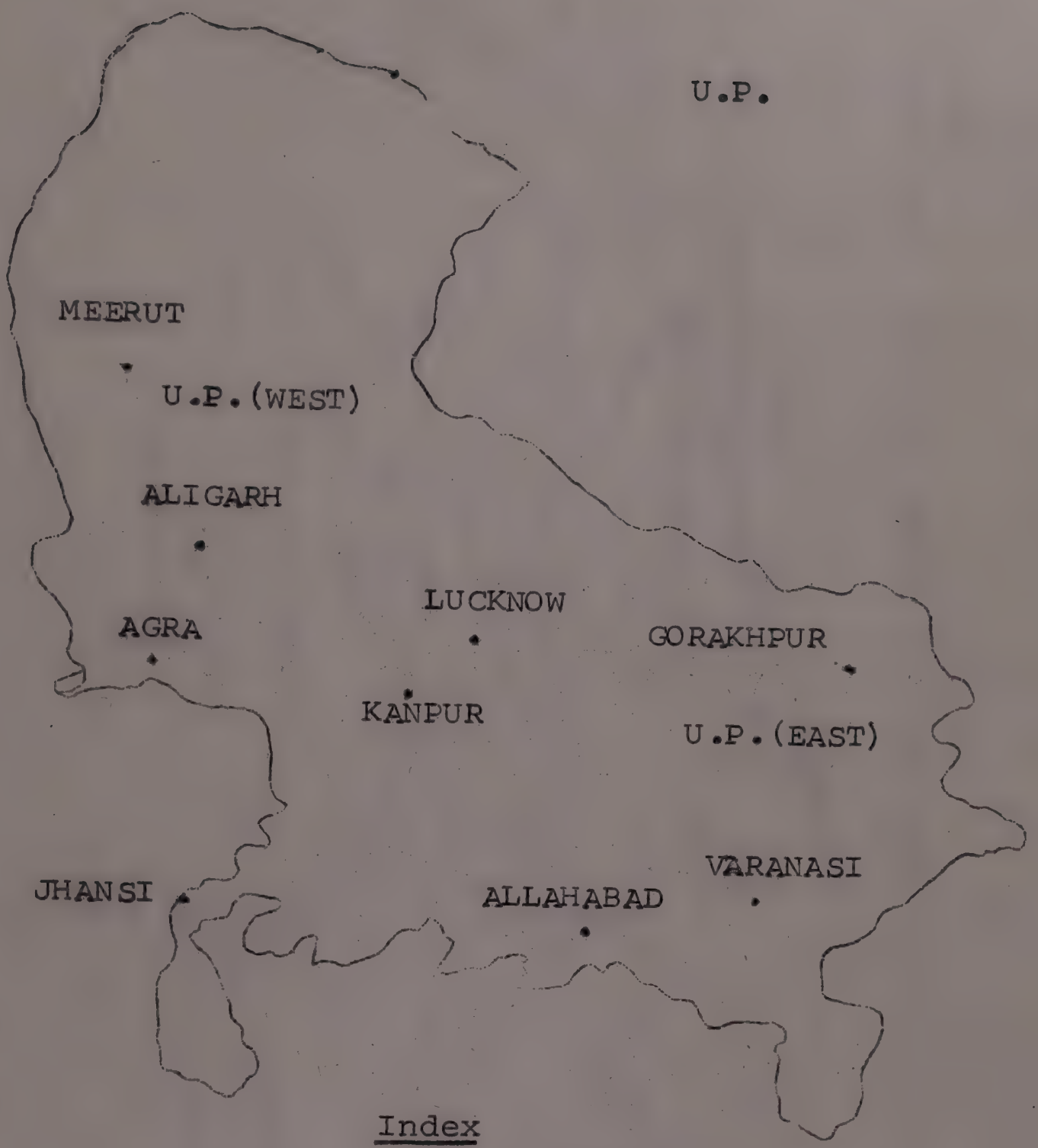
2. Garg et al (1982) Health profile of a rural population in Meerut District, IJCM VII(2), 41-47.

3. Garg et al (1984) Morbidity and Mortality profile of children in a rural area, Med & Surgery XXIV (7) 9.

4. Paul D (1983) Assessment of working of subcentres in PHC Machhra Meerut. A thesis for M.D. (SPM), Meerut University, Meerut.

5. WHO (1988) Essential drug requirements - A practical manual. Action programme on Essential drugs. Ist Edition, Geneva.

6. Yunus M (1978): A general health survey in a group of villages. Jawa Block, Aligarh UP Ind. Med. Gazzett 112-9, 340.




Index

. Medical Colleges.

Fig.1: Showing U.P.(West) and U.P.(EAST)

Fig 2: Morbidity Pattern in U.P.(West) at P.H. Care Level

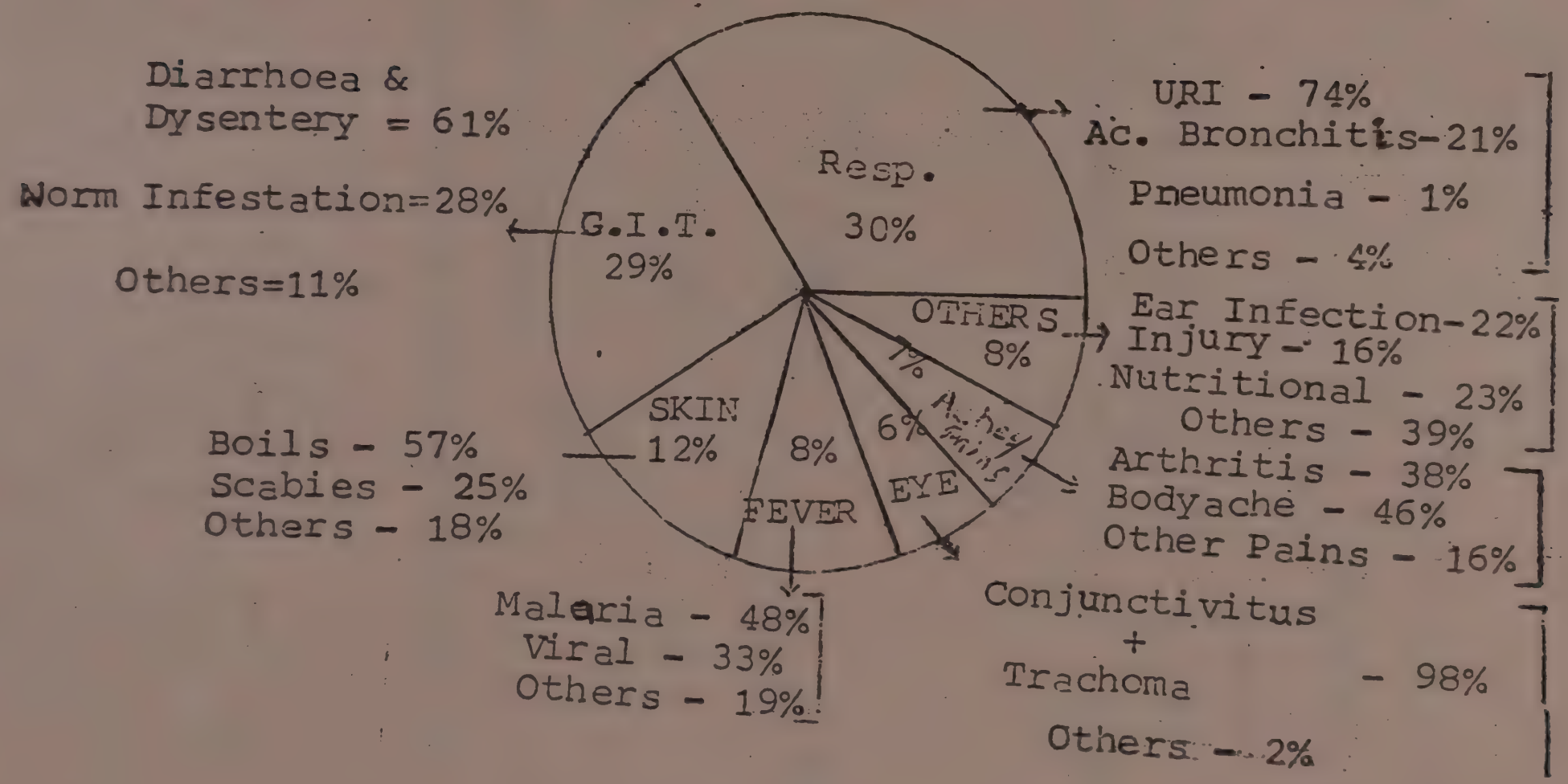


Fig. 3: Seasonal Variation in Morbidity

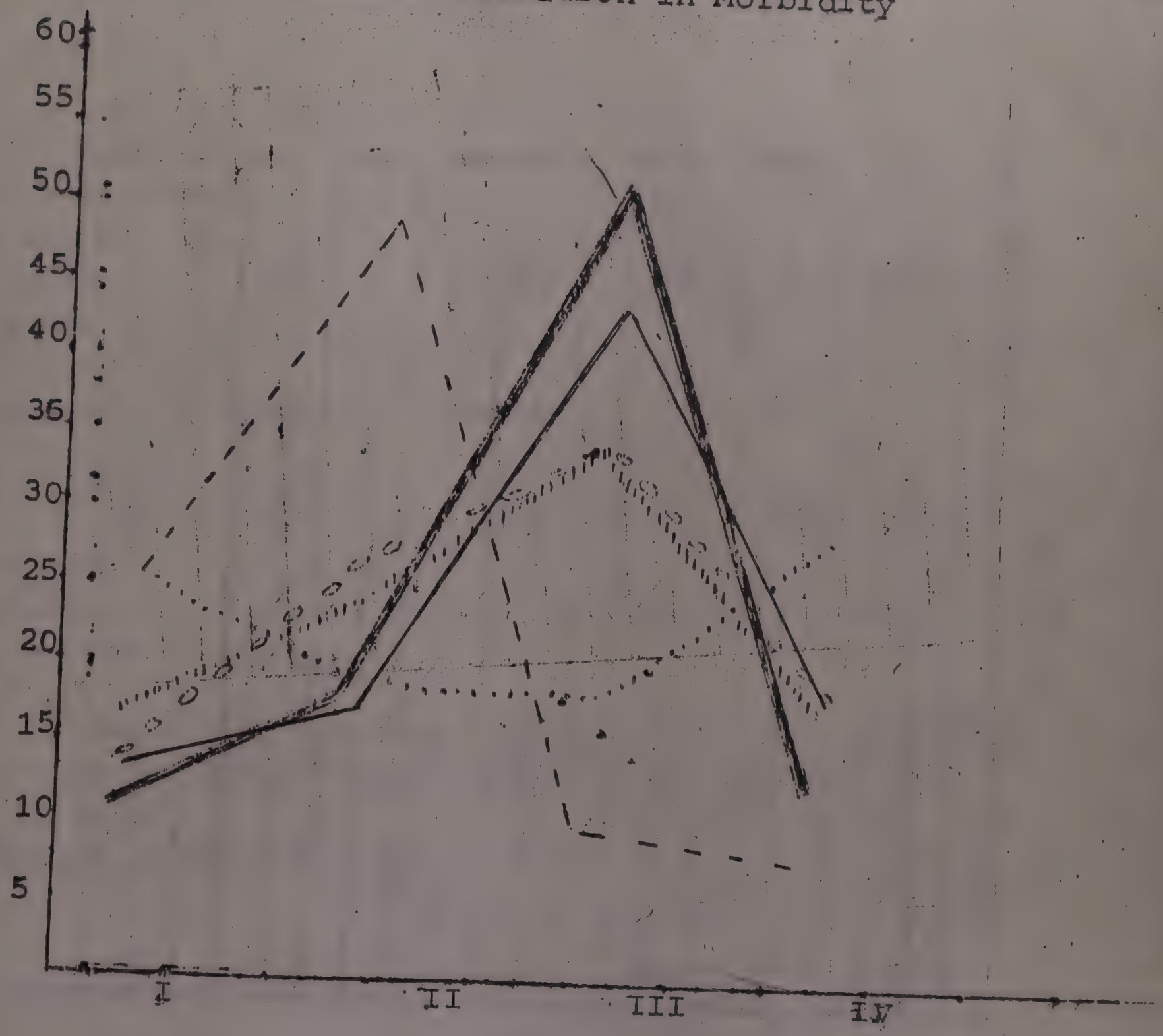



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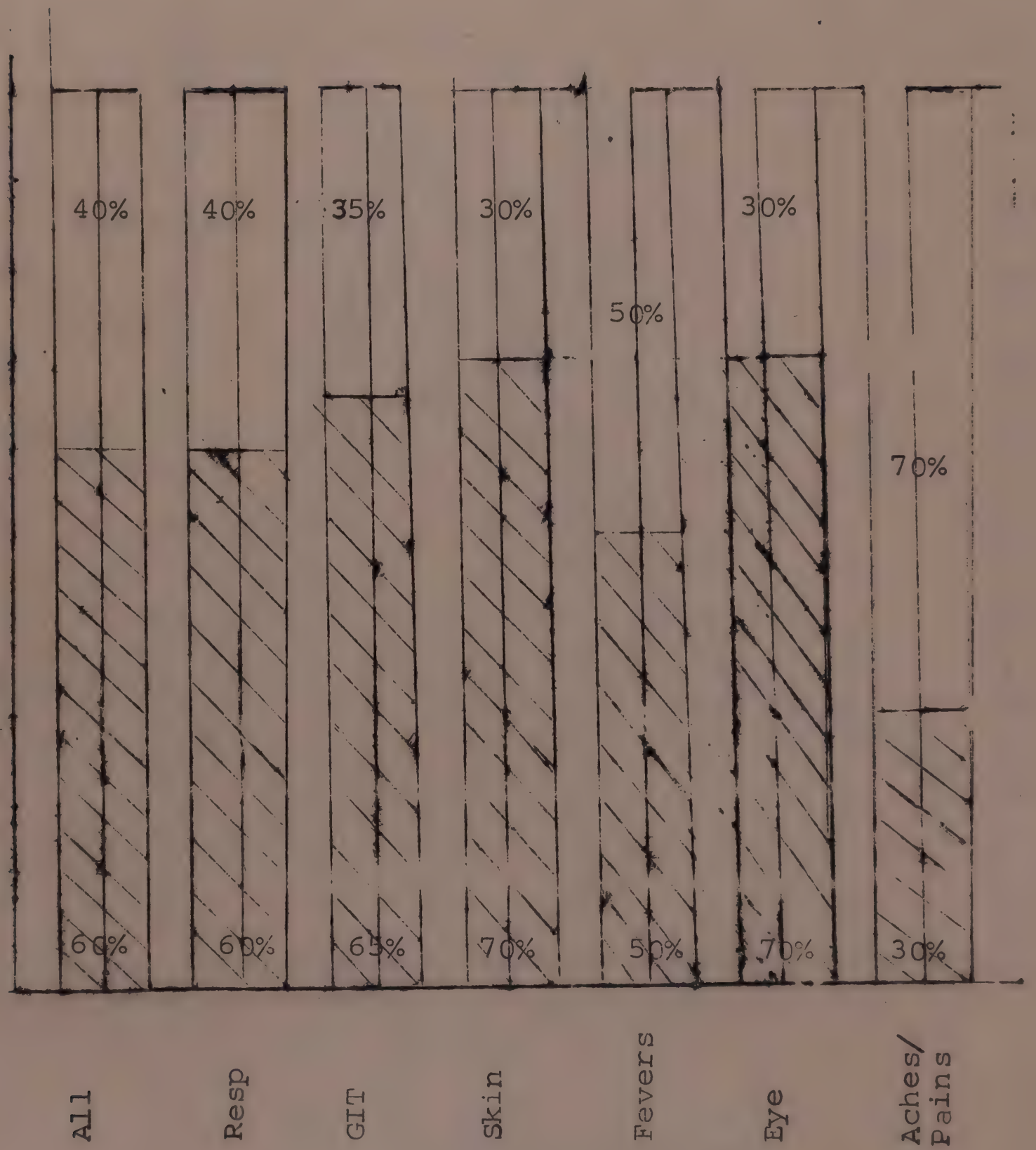
Fig 4: Morbidity by age groups



# Review of Morbidity and Mortality Profile of Uttar Pradesh(East) and Requirements of Drugs in Primary Health Care

- J.V. Singh*

With the commitment of World Health Organisation to'Health for All by 2000 AD' and the Primary Health Care approach, the morbidity and mortality profile of India has started rapidly changing. Thus at this stage it has now become essential to review the existing vital statistics and the requirement to combat the various health problems. The essential drugs have important role to play to reduce the morbidity and mortality caused by certain major public health problems.

There is no denying of the fact that the infrastructure of the Health Service is satisfactory but certain existing unavoidable reasons are causing hinderances and are indirectly responsible for high morbidity and mortality including the requirements of drugs.

The latest authenticated data for U.P. are not available; as such the review contains the data that are available.

## Demographic Profile (1981)[1]

The population of U.P. is 1,109 Lakhs.

## Medical & Health Service Units of U.P. (1981)[1]

The various Government institutions related to allopathic system of Medicine in U.P. are as below:

| | | |
|---|---|---|
| (1) | No. of Urban Centres | 267 |
| (2) | No. of PHCs | 2046 |
| (3) | No. of Sub-centres | 20153 |
| (4) | No. of Post Partum Centres | 203 |
| (5) | No. of Medical Colleges | 9 |

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Other Vital Statistics of U.P. (1981)[1]

| | |
|---|---|
| Birth Rate | 37.5 Live birth/1000 populatio |
| Death Rate | 14.6/1000 population |
| Infant Mortality Rate | 132/1000 Live birth |

Morbidity in a Rural Area (1981)[2]

| | Disease | Rate Per 1000 |
|---|---|---|
| (1) | Common Cold | 36.66 |
| (2) | Diarrhoeal Disease | 41.78 |
| (3) | Dis. of Eye | 14.49 |
| (4) | Bronchitis | 19.61 |
| (5) | Asthma | 5.97 |
| (6) | Tub. of Resp. Syst. | 3.41 |
| (7) | P.U.O. | 12.79 |
| (8) | Enteric Fever | 2.55 |
| (9) | Viral hepatitis | 1.70 |
| (10) | Boils, Furunculosis, abscess, corbuncles | 4.26 |
| (11) | Measles | 3.41 |
| (12) | Whooping Cough | 1.70 |
| (13) | Influenza | 0.85 |
| (14) | Worm Infestation | 17.05 |
| (15) | Disease of female genital system | 9.38 |
| (16) | Avitaminosis & other def. disease | 19.61 |
| (17) | Anaemias | 16.20 |
| (18) | Dental Caries | 3.41 |
| (19) | Heart valvular Diseases | 1.70 |
| (20) | Hypertension | 1.70 |
| (21) | Leprosy | 4.26 |
| (22) | Filariasis | 2.55 |
| (23) | Malaria | 11.08 |

Mortality in a slum Area (1989)[3]

| Cause | Rate per 1000 |
|---|---|
| Respiratory | 3.4 |
| Gastrointestinal | 2.1 |
| Congenital | 0.8 |
| Accidents | 0.8 |
| Cardiovascular | 0.4 |
| Child birth | 0.4 |
| Fevers | 0.4 |
| Neoplastic | 0.4 |
| Undiagnosed | 3.4 |

In a recent study (1989)[4] reported the ARI episodes amongst Rural children is as below:-

| Age (Yrs.) | No. of Episodes per child |
|---|---|
| 0-1 | 5.11 |
| 1-2 | 2.24 |
| 2-3 | 3.24 |
| 3-4 | 3.02 |
| 4-5 | 3.22 |
| Overall Average | 3.83 episode per child per year |

## Age-wise incidence of Diarrhoea n children (1985)[5]

| Age (Yrs.) | Average Episodes per child | | | |
|---|---|---|---|---|
| | Rural | | Urban | |
| | Male | Female | Male | Female |
| 0 - 1 | 5.38 | 4.27 | 4.50 | 2.66 |
| 1 ∠ 3 | 4.13 | 2.90 | 2.56 | 2.76 |
| 3 ∠ 5 | 2.77 | 1.93 | 1.51 | 1.53 |
| 5 ∠ 10 | 1.07 | 1.15 | 0.80 | 0.61 |
| 10 + | 0.75 | 0.63 | 0.43 | 0.34 |
| | 1.75 | 1.48 | 1.15 | 0.98 |

## Overall Morbidity and Mortality of U.P. (1988)[6]

The overall morbidity and mortality rates show that the communicable diseases are the major causes of high morbidity and mortality as below:

| Disease | Case No. | Rate/1000 | Death No. | Rate/1000 |
|---|---|---|---|---|
| Cholera | 3 | .000002 | 0 | 0 |
| Gastroenteritis | [illegible] | 00.02 | 322 | 00.002 |
| Enteric Fever | 10695 | 00.096 | 72 | 0.0006 |
| Chicken Pox | 456 | 0.004 | 0 | 0 |
| Influenza | 41144 | 0.371 | 0 | 0 |
| Viral Hepatitis | 67 | 0.0006 | 10 | .00009 |
| Viral Encephalitis | 162 | 0.0014 | 71 | .0006 |
| Dogbite | 597 | .005 | - | - |
| Guinea worm | 0 | 0 | 0 | 0 |
| Dengue Fever | 0 | 0 | 0 | 0 |
| Diphtheria | 155 | 0.0013 | 5 | .000045 |
| Whooping Cough | 8025 | .0723 | 1 | .000009 |
| Tetanus | 2029 | .0182 | 436 | .0039 |
| Measles | 4834 | 0.0435 | 105 | .00094 |
| Poliomyelitis | 771 | 0.0069 | 7 | 0.00006 |
| Tuberculosis | 27989 | 0.2523 | 145 | 0.001 |
| Malaria | 126181 | 1.1377 | 0 | 0 |
| Syphilis | 4721 | 0.0425 | 0 | 0 |
| Gonococcal Inf. | 1437 | 0.0129 | 0 | 0 |
| Chanceroid | 1634 | 0.0147 | 0 | 0 |
| L.G.V. | 268 | 0.0024 | 0 | 0 |
| Leprosy - Prev | 3.7/1000 | | - | - |
| Cases | 479,452 | | | |

Budgetary Allocation

For purchase of [illegible] yearly budget available is as below:

| | |
|---|---|
| New PHCs (30,000 Population) | Rs.12,000 |
| Old PHCs (1 Lakh Population) | Rs.18,000-20,000 |
| Upgraded PHCs | Rs.50,000 |

Out of the above budget 60 per cent is at the disposal of Central Medical stores Department when 40 per cent is utilised by the Chief Medical Officer of the Districts.

Drugs Needed for various Illnesses

| | |
|---|---|
| Diarrhoea | ORS |
| Pneumonia | CO-trimoxazole, Ampicillin |
| Other ARI | Salbutamol |
| Fever | Paracetamol |
| | Chloroquin/Primaquin |
| | Chloram phenicol |
| Malnutrition | Multi vitamin |
| Anaemia | Iron, Folic Acid, B-comp. |
| Skin Inf. | Mercurochrome, Gentian violet, Benzyl. Benzoate |
| Eye & Ear Infections | Sulfacetamide drops, Oxytetracycline ointment |
| Worm infestation | Mebendazole/Piperazine |
| Allergies | Chlorpheniramine Maleate |
| Vomiting | Metoclopramide |
| Convulsions | Dilantin, Phenobarbitone |

Antituberculosis andanti-leprosy drugs.

Drugs for emergency and resuscitation.

## References


1. U.P. at a Glance, Facts & Figures (1988) Directorate General of Health Services.

2. Maheshwari, C (1981), Second Repeat General Health Survey in a Group of Villages in the Area of Rural Health Training Centre, Sarojini Nagar.

3. Vital Statistics in Urban Slums (1989) Deptt. of SPM, KGMC, Lucknow (Unpublished Data).

4. Epidemiological Study of Acute Respiratory Infections (1989), Department of SPM, KGMC, Lucknow (Unpublished Data).

5. Gupta, S.K. et al (1985) Thesis for MD entitled Incidence of Diarrhoea in Children in A Rural and Urban Community of Lucknow - A comparative study.

6. Govt. of India (1988), Health Information of India, Central Bureau of Health Intelligence, Directorate General of Health Services, Ministry of Health & Family Welfare.

# Review of Morbidity and Mortality Profile of Madhya Pradesh, and Requirements of Essential Drugs in Primary Health Care

- V.B. Saxena*

At the outset, it must be stated that, Primary Health Care is not merely a problem of budget and supply of drugs, but it is a challenging task of evolving a system wherein people are involved in understanding and managing their health problems. There is so much regional variation in the ecosystem, the life-style and the local resources that one formula for health care cannot be applicable for all. This is true of Madhya Pradesh because, though administratively a single unit, it is the biggest state (in area) in the umbilical region of the country, providing origin for rivers running in all directions. It is culturally and geographically linked with so many life-styles that one profile and one formula cannot be applied for the whole state.

More than one-third of the state population is of scheduled tribes and scheduled castes, and this fact is combined with tough hilly terrains and thick forests have resulted in a situation where collection of rational health intelligence is still in a primitive stage. A profile based only on hospital data is likely to give a distorted picture of the real situation faced by the community. The present paper, therefore, describes the situation as observed during various community studies and field investigations carried out by the author from time to time. An attempt has been made to limit the description to only those problems where drugs under primary care are likely to be effective.

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Malaria

View of the map of India showing hyperendamic areas of malaria indicates that Madhya Pradesh has the lion's share of the malarial reservoir in the country. This reservoir is situated in the umbilical region of the country, and is in continuity with the neighbouring reservoir of Bihar and Orissa, and hence it is rational that at present this reservoir should be the central target for any national malaria programme. However, now that the responsibility of case detection and treatment in malaria has been decentralized for primary health care, the situation needs to be reviewed on a priority basis.

Madhya Pradesh faces problems of both endemic malaria as well as epidemics of malaria. In endemic areas, the adults are usually resistant and do not consider malaria as a serious problem. The major punch of the problem is faced by children and pregnant mothers. Hence the primary health care workers involved in maternal and child health must be specially trained to tackle malaria. During childhood, the typical picture of shiver, simmer and sweat is seen only in 30 per cent cases, and convulsions and haemolytic anaemias are frequently responsible for a high proportion of child-death. In areas adjacent to endemic focci, adults have lost all immunity for malaria and hence at suitable intervals, malaria epidemics involve all ages and both sexes.

Prompt referral of serious cases has an important role in the management of malaria. It is, therefore, recommended that a clear definition be adopted of what should be considered as a serious case for referral. This definition varies according to the diagnostic capacity of the centre/worker (WHO 1986), and needs to be emphasized in the training programme for paramedical workers (table 1). As regards the essential drugs in malaria, paracetamol, chloroquin, and primaquin have been used routinely, but in Kanker unit of Baster district, because of some resistance factor, metakelfin has also been used.

Yaws or Endemic Treponematoses

Yaws is one of the most crippling and disfiguring tribal disease which begins in childhood and can be cured by one single injection of Benzathine benzyl penicillin. For the control of the problem, adequate number of latent and contact cases should also be treated, and as per WHO policy, the number of latent and contacts is usually 4-10 timesmore than the number of clinically active cases. In a recent survey (ICMR 1987), 7 per cent of examined population of Abujmedias in Baster district was found clinically manifestating the disease. The tribal people are, therefore, quite familiar with the problem, but the medical profession is usually ignorent of the problem. Yaws begins where 'road ends' or 'on the yonder side of the hill', and in such areas, the posts of the medical officers are usually lying vacant. It is, therefore, quite obvious that the problem of yaws cannot be tackled without the involvement of primary health care workers. The multipurpose worker has been trained for immunization, and he can also be easily trained in tribal areas for giving penicillin injection and management of yaws treatment centres.

Elvin, the famous anthropologist, has stated that "there is no gift of modern civilization to which the tribals responded more eagrely or with greater gratitude than the modern treatment of the distressing disease - yaws". It would be useful to indicate that the reservoir of malaria and yaws are nearly overlapping, and because of the phenomenon of 'felt-need' malaria problem cannot be solved without attention to yaws problem. For obvious epidemiological reasons, the health administrators at Delhi and Bhopal level are keen to solve the malaria problem but not so sensitive to yaws problem, and hence an understanding of this link between yaws and malaria is important, Yaws is not a social stigma to tribes, but now it must be considered as

national stigma and an indicator of primitive life where even primary health care has not percolated.

Acute Respiratory Infections (ARI)

India is now nearly ready to launch its ARI Control Programme. At present in Madhya Pradesh, management of moderate and severe ARI cases is limited only to primary health centres and higher levels. However, now it is well realized that using simple techniques of classification based on clinical manifestations (i.e. rapid breathing rate > 50 per minute, chest indrawing and inability to drink), and standard case management technique through use of penicillin injections or cotrimoxazole for moderate cases in the community by multipurpose workers is feasible (CDB 1988) for ARI control. For severe cases, it is obligatory that proper referral to PHC be arranged, and the PHC be also linked to have a continuous supply of oxygen cylinders.

Measles

Data about its prevalence rate etc. are not available for Madhya Pradesh, but the author was exposed to the magnitude of its killing impact in tribal areas in 1981, when 102 child-deaths were reported from 16 villages in Jagargunda block of Baster district. Measles, when combined with malnutrition etc., becomes a killing disease, and vitamin A supplementation and measles vaccine have proved very useful in its control. The State of Madhya Pradesh has given due priority to measles vaccination in tribal areas.

Meningitis

In an epidemic form, the disease appears to have entered India recently through Nepal in 1983 and disseminated through Delhi in 1985. At present, the disease is in the process of

establishing a CSM belt similar to that in Africa. It would be useful to recall a malaria like epidemic of meningitis among the tribes in the neighbouring district of Kalahandi of Orissa in 1987, which was investigaged by 13 teams from NICD (CDB 1987). In this epidemic, 136 deaths were reported among Kutia-Kondh tribes in 57 villages. Of these, 87 children died of fever with vomiting, and death was reported within 24-48 hours. Main clinical features were fever, vomiting, headache, neck-rigidity and diarrhoea in a few cases.

In Madhya Pradesh, only 32 cases were reported in 1985, but in 1988-89, the meningitis outbreak had affected the districts of Sagar, Damoh, Chatterpur, Mandsaur, Shajapur, Indore, Ujjain and Satna, and up to 29 March 1989, 249 cases and 68 deaths were reported (CDB 1989). Management of meningitis problem demands that the reporting system be adequately tuned (see appendix 2). Penicillin injection is the drug of choice for treatment, and sulfadiazine is recommended for chemoprophylaxis.

Shigellos.s and other dysentries

The current strain of shigellosis appears to have only recently travelled from Bengal via Orissa to Bastar and other districts of Madhya Pradesh. The author was consulted to advise in 1985 when 103 deaths were reported in 12 villages of Chintalnar block in Baster district. By 1987, 18 out of 32 blocks in the same district were invaded, and the disease now appears to have become endemic and is locally called as 'Nettur Potta' or 'Khuni Pechis'. Oral Rehydration Solution (ORS) appears to have only a limited effect on this problem, and the problem of drug-resistance also may be there. It is, therefore, recommended that in addition to ORS, nalidixic acid be also provided. Metronidazole is also needed to face the problem of endemic amoebiasis in some areas.

## Filariasis

As per CBHI report (1983), Madhya Pradesh has about sixty thousand cases and 53 thousand carriers of filaria. About 17.79 million population is exposed to the risk of getting filaria and of this the bulk i.e. 14.47 million are in rural areas and need attention of the primary health care workers. Whereas the strategy of providing a DEC medicated cammon salt may be tried in some well-defined endemic areas, the present recommendation is that Di Ethyl Carbamazine (DEC) be made available to all the village health guides and multipurpose workers for treatment of acute and chronic cases of filariasis, after giving them necessary training.

## Ankylostomiasis

A study, carried out by the author in tribal block of Gariaband in Raipur district, revealed that the tribes depend for their livelihood on forest-yields like tendu-leaves, sal-seeds, mahua-flowers, tamarind-fruits, harrah, catechue etc and hence they live in the forest and work in the forest. The forest soil is rich in organic matter, and the moist humid tropical climate provides an ideal place for the development and propagation of the hookworm larva. In the above study in 12 villages, 64.3% of stool samples (total samples examined 268) were found positive for ova. The youngest child infested was of 3 years. It appears that as soon as the child learns to walk, the hookworm provides a steady company. The maximum impact of the parasite is seen during pregnancy, and in the above study, 83.2 per cent of pregnant mothers (173 blood samples examined for haemoglobin percentage) were found anaemic. It is, therefore, obligatory that together with other anti-helminthics, oxyphenomium bromide be also provided in tribal areas.

## Other Problems

Problems like scabies, louse-infestation, night-blindness, conjunctivitis, trachoma, cataract etc. also demand the attention of the primary health care worker for diagnosis, treatment or referral for further necessary action and follow-up.

The problems of epidemics of jaundice, Japanese encephalitis, dengue fever etc. and endemic problems of tuberculosis, leprosy, goitre, guineaworm infestation are there, but these have not been discussed here because well defined strategies exist for them.

## Recommendations

To make the primary health care services more exacting and meaningful, it is obligatory that the epidemiological principles of health practice must percolate to the ground level. As envisaged in the National Health Policy (8.5), epidemiological stations should start working at the periphery, and instead of following the traditional ostrich policy, the district epidemiological unit should be strengthened to make it work and tune the services to actual needs of the community. A copy of the recommended weekly surveillance reports and a recommendation for yaws reporting system in tribal areas are enclosed only to stimulate thinking of how to reach the unreached. A collection of good health intelligence from the ground level will render the essential drug supply programme more cost-effective.

The nature of essential drugs and their utilization will also depend on the quality of training provided to the field worker. Looking to the present trend, it appears that for the coming decade, the medical man may even be temporarily written off as a working hand in tribal areas and

greater stress and emphasis be given to the training of multi-purpose workers and ground level workers like VHG, AWW, TBA etc. They are the frontline soldiers deserving maximum attention in planning the supply. If this objective is clearly recognised, it would not be difficult to produce suitable training material for our people in our language and not copy the imported material andtechnology in toto.

## References


1. CBHI (1983) "Health Service in India-1982-83" DGHS New Delhi.

2. CDB (1987) "Meningococcal meningitis outbreak in district Kalahandi Orissa" Comm Dis Bull IV (1), NICD 22 Shamnath Marg, Delhi.

3. CDB (1988) "Acute respiratory infections in India" Comm Dis Bull V (4), NICD 22 Shamnath Marg, Delhi.

4. CDB (1989) "Meningococcal meningitis" Comm Dis Bull VI (1), NICD, Delhi.

5. ICMR (1987) "Health Profile of Abujmadias - a brief note on the preliminary findings" an unpublished document of Regional Medical Research Centre for tribals, ICMR, Medical College, Jabalpur.

6. Saxena V.B. (1985) " Primary Health Care and feasibility of Yaws Eradication in India" Primary Health Care in the Making page 370-376, ed by U. Lasser, R. Senault, H. Viethues, Springer-Verlag, Berlin Heidelberg 1985.

7. WHO (1986) "10th Expert Committee Report on Malaria" Technical Report Series, 7350, Geneva.

Appendix 1

## Diseases Recommended for Surveillance in India

| | |
|---|---|
| **Group A** | **Below 5 years of age** |
| i | Diarrhoeal Diseases |
| ii | All types of fevers |
| iii | Measles (fever with rash) |
| iv | Poliomyelitis (Fever with paralysis/muscle weakness) |
| v | Viral Hapatitis (Jaundice) |
| vi | Japanese encephalitis (Fever with stupor/coma) |
| vii | Meningococcal Meningitis (fever, stiffness of neck, vomiting) |
| viii | Any other disease of local importance |
| **Group B** | **Age of 5 years and above** |
| i | All types of fever |
| ii | Viral Hepatitis (Jaundice) |
| iii | Japanese encephalitis (fever with stupor/coma) |
| iv | Meningococcal Meningitis (fever, neck rigidity, vomiting) |
| v | Any other disease of local importance. |

A lay reporting system for these diseases is recommended.

(Source: "Epidemiological Services in India"1987 , published by National Institute of Communicable Diseases, 22 Shamnath Marg, Delhi 110054)

(Appendix 2)

## REPORTING SYSTEM FOR YAWS

| Reporting Level | Who to Report | What to Report | Where to Report | Expected Response |
|---|---|---|---|---|
| 1. Peripheral | - Patient (usually) children)<br>- Head of family<br>- Head of the village<br>- V.H.G.<br>- School teachers | - Training needed by liberal supply of picture cards for diagnosis.<br>- Health Education by involving Education department. | Any Health Care Institution within 5 K.M. radius. | - Registration (Yaws Registers to be maintained).<br>- Treatment of cases.<br>- Follow up of contacts. |
| | M.P.W. | - Seeing any cases or suspects during field visit. Needs training. | Supervisor or Medical Officer. | - Field investigation and necessary initiation of control measures. |
| | Medical Officer | - Monthly Total of cases (infectious, Hyper Keratosis, ulcers, bones & joint deformities). Contacts, Pencillin spent. | - District Head Quarter (Yaws Cell) | - Supply of penicillin Education material.<br>- Supervision<br>- Monitoring and Evaluation by Serology etc. |
| 2. District Level. | Yaws Cell in the effected district. | - Cases treated, Contacts treated, Blocks reporting Yaws cases. | - Yaws Cell at the State Level. | - Mass Media support.<br>- Involving Tribal Welfare and Education Department<br>- Ensuring Inter District Co-ordination. |
| 3. State Level. | - Yaws Cell at the Directorate. | - Districts Reporting Yaws<br>- Cases treated, Contact treated. | - Yaws Cell at Central Level. | - Evaluation.<br>- Co-ordination of neighbouring States for simultaneous action.<br>- Involving International Agencies and Experts for Guidance. |

सारणी क्रमांक---

नैदानिक क्षमता के विभिन्न श्रेणियों के केन्द्र में गंभीर - मलेरिया की परिभाषा

| लक्षण | निदान केन्द्र की श्रेणी | | |
|---|---|---|---|
| | §1§ दूरस्थ परिसरीय केन्द्र | §11§प्रथम निर्देशन केन्द्र | §3§ द्वितीयक निर्देशन केन्द्र |
| **लाक्षणिक निर्धारण** | | | |
| - किसी अन्य स्पष्ट कारण के अभाव में भी इतना दुर्बल हो गया है कि चल फिर नहीं सकता | * | + | + |
| - प्रमस्तिष्क मलेरिया (Cerebral Malaria) | +[1] | +[2] | +[3] |
| - मौखिक उपचार के पश्चात वमन या प्रवाहिका | + | + | + |
| - रक्त-स्त्राव या स्कंदन के विकार | + | + | + |
| - गंभीर रक्ताल्पता (Severe Anaemia) | +/- | + | + |
| - पीलिया (Jaundice) | +/- | + | + |
| - अतिताप (Hyperthermia) | - | + | + |
| - परिसंचरण निपात (Circulatory Dollapse) | - | + | + |
| - हीमोग्लोबिनमेह (Haemoglobinuria) | - | + | 1 |
| - तरल विद्युत उपघटय या एसिड, बेस विक्षोभ (Acid-Base Disturb nce) | - | + | + |
| | - | +/- | + |
| - उपद्रवी/आनुषंगिक संक्रमण (Infections) | - | +/- | + |
| - फुफ्फुसी शोफ (Pulmonary oedema) | - | +/- | |
| - अल्पग्लूकोज रक्तता (Hypoglycaemia) | - | +/- | + |
| अन्य निदानों का अपवर्जन (Exclusion) | - | +/- | + |
| Hyperparasitaemia | -(+)[4] | +/- | + |

x निर्देशित करने के कारणों में प्रारंभिक उपचार के सफल परिणाम न मिलना भी सम्मिलित है ।

1. संभ्रम, निद्रालस्यता, आक्षेप
2. मस्तिष्कावरण शोथ §ग्रीवा-दृढता और प्रकाशासह्यता§ का अपवर्जन
3. कटिवेधन द्वारा मस्तिष्कावरण शोथ का अपवर्जन
4. परजीवी रक्तता की आतपरजीवी रक्तता कहते है । 2 % से अधिक की परजीवीरक्तता का निदान कुछ परिसरीय केन्द्रों में भी किया जा सकता है ।

स्त्रोत : TS 735, P.60 (WHO 198

# A View about and Medicines to be used in the Rural Health Care Delivery System

- Sarbjeet Singh*
- S.C. Tiwari**

Rural health care delivery is an important component of socio-economic development. The availability of health care materials such as medicines, dressings, surgical materials, disinfectants etc. is a decisive factor and essential drugs are the most important input.

The main areas concerning drugs and medicines which a rural based doctor has to contend with are briefly mentioned below and the main points brought out.

## I. The availability and Choice of Medicines

There are two main sources, the formulary of the P.H.C. dispensary which is limited to essential drugs and the open market which has many unnecessary medicines besides a few important life-saving drugs most of which are cost Choose drugs from these sources depending on (1) Need (2) severity of illness (3) paying capacity of patient (4) Referral fasibilities available. Try to develop and channel for emergency procurement of medicines from nearby towns.

## II. Rational Use of Medicines

Adopt rational prescribing habits and try not to over or under prescribe. Guidelines and regimens are available for all preventive, prophylactic and curative aspects of the diseases covered by the National Health Programmes, which have to be followed by the doctor. Patient education in the proper use of medicines should be promoted through posters , talks and handouts .

---

* Lecturer, Department of Pharmacology.

** Reader, PSM, Gandhi Medical College, Bhopal

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III. Interaction with Traditional Systems of Medicine (TSM)

The role of traditional systems of medicine in health care delivery has now been recognised and this is more relevent in the rural setting where modern medicine has yet to reach.

1. Accept the role of TSM practitioners in rural health.
2. Involve them in the implementation of National Health Programmes and Health problems of your area.
3. Educate the public on the scientific basis of modern medicine and the role of modern drugs.
4. Motivate the public to accept the benefits of modern medicine.
5. Discourage risky household remedies and educate the public on the risks of such measures.
6. Try to disregard remedies that are not harmful to the patient so as to obtain maximum psychological and place benefits from them and the patients co-operation.
7. Many herbal medicines have adverse reactions. Be alert to this possibility and discourage their use through education. Discontinue their use during drug therapy.

IV. Drug Abuse

Narcotic drug abuse and also self-prescribing are common practices in the rural setting. Discourage the same through talks and posters. Study the pattern of drug abuse in your area so as to have emergency medicines and antidotes available.

V. Essential Drugs

Essential drugs is a concept now accepted by all member counries of the W.H.O. which aim to make available to the rural health service doctors as far as possible,

medicines and drugs that fulfill the following criteria:

i) Drugs which meet people's common health needs.
ii) Drugs which have significant theraputic value.
iii) Drugs which are acceptable and safe.
iv) Drugs which offer satisfactory value for money.

(W.H.O. essential drugs monitor Vol.4-1987 Pg.1)

The conept has been modified to suit the regional differences in health needs and the rural doctor will have at his disposal those essential drugs deemed as necessary for meeting the health care needs of this area. The doctor should try to prescribe for the patient medicines from this list as far as possible.

## VI. National Drug Policy

The main components of a National Drug Policy are:

i) Drug selection and use
ii) Supply of drugs
iii) Quality assurance
iv) Manpower needs
v) Legislation and regulatory control
vi) Financial resources
vii) Promotion and dissemination of information
viii) Evaluation and monitoring
ix) Collaboration and Co-ordination.

VII. Up-to-date Drug Information

Time tested medicines are the best choice in the rural setting. However, to keep abreast with improved medicines and new drugs available in the market the doctor posted in a rural area should try to obtain up-to-date drug information through reliable sources.

The following are the sources of information on drugs and therapeutics with addresses:

i) Current index of Medical Specialities CIMS Rs.20/- per copy thrice a year. Bio-guard Medical Services, 88/1, 10th cross, P.B. No. 318, Bangalore - 560603.

ii) Monthly index of Medical Specialities MIMS Rs.16/- per copy. MIMS-India, 90 Nehru place, New Delhi-110019.

iii) Drugs bulletin Rs.3/- per copy edition Dr. V.S. Mathur, Deptt. of Pharmacology, P.G.I., Chandigarh-160012.

iv) Drug Information Deptt. of Pharmacology.

v) Mannual of Medical Therapeutics, Rs.125/- 25th edition little brown & Co. USA available at Medical Bookstore.

Introductory Remarks

The International Conference on Primary Health Care held at Alma Ata, USSR from 6 to 12 September 1978 was attended by a high-powered delegation from India headed by the then Union Minister of State of Health and Family Welfare. We are thus committed to the Declaration of Alma-to provide an accepted level of health to all by the year 2000 A.D. Provision of Essential Drugs forms an integral part of the programme.

## Drugs for Primary Health Care

### List 'A'

For those centres where the drugs would be given by grade 1 Health Workers (educated upto class VI at least)

1. Acetylsalicylic Acid
2. Aluminium hydroxide. (o)
3. Antihaemorrhoidal drug. (o)
4. Benzoic acid + Salicylic Acid.
5. Chlorpheniramine. (o)
6. Chloroquine
7. Ferrous sulphate
8. Gentian violet
9. Isbagula husk/Senna
10. Lindane/Benzyl benzoate
11. Mebendazole/Piperazine
12. Noscapine
13. Oral rehydration salts
14. Paracetamol
15. Retinol
16. Salbutamol/Aminophylline
17. Sulphadimidine (o)
18. Tetracycline eye ointment.

Drugs followed by a round symbol (o) are example of a therapeutic group, select any member based on availability and comparative cost.

## LIST 'B'

For those centres where the drugs would be administered by Grade II workers (educated upto class X or more and are adequately trained.

1. Acetylsalicylic acid
2. Activated charcoal
3. Adrenaline injection
4. Aluminium hydroxide (o)
5. Ampicillin (*)
6. Antihaemorrhoidal drug (o)
7. Benzoic acid + Salicylic acid
8. Calamine lotion
9. Chlorhexidine
10. Chlorpheniamine (o)
11. Chloroquine
12. Ergometrine
13. Ferrous sulphate
14. Gentian violet
15. Iodine
16. Ipecacuanha
17. Ispagula husk/Senna
18. Lindane/Benzyl benzoate
19. Mebendazole/Piperazine
20. Metronidazole
21. Noscapine
22. Oral rehydration salt
23. Oxyphenonium bromide (o)
24. Paracetamol
25. Penicillin-Pen.V. and Procaine Pencillin injection
26. Promethazine
27. Retinol
28. Salphadimidine (o)
29. Salbutamol /Theophylline
30. Tetracyline eye ointment
31. Trimethoprim.

Drugs followed by a roundsymbol (o) are example of a therapeutic group, select any member based on availability and comparative cost.

An asterik (*) Ampicillin is a safe and useful drug but can cause hypersensitivity reactions, avoid its use in subjects giving history of reaction to the pencillin group.

Source:- Drug Bulletin Oct. 1983 Volume 6.

## Proposed Essential Drugs for Primary Health Care in Rural Area

**Group A** — Maternal and Child Health

Iodine, Ergometrinel, Ferrous Sulphate, Oral rehydration salts, Oxyphenonium bromide, Promthazine, Inj. Tetanus Toxoid Oral Peadiatrics drops, Ampicilline.

**Group B** — Antibiotics and ANTI Infections

Inj. Pencillin G, Tab. Trimethoprim, Cap. Ampicillin 250 mg, Tab. Sulphadiazine, Tab. Isonex.

**Group C** — Common Ailments

Tab. Aspirin, Tab. Salbutamol, Tab. Chlorphenarimine, Tab. Chloroquine, Tab. Diazepam.

**Group D** — Antidiarrhoels and Anthelmintics

Metronidazole, Piperazine, Codeine, ORT, Streptomagma Tab.

**Group E** — Skin

Iodine, Quadriderm, Garamycin, Benzyl Benzoate, Miconazole, Ascorbic Acid, Multivitamine Tab.

**Group F** — Eye and ENT

Sulphacetamide drops, chloromycetine applicaps.

**Group C** — Surgical Materials

Ethyl Chloride spray, Disposable syringe 2ml, Sterile blade XI, Suture with needle.

**Group H** — Emergency Drugs

Inj. Adrenaline
Inj. Avil
Inj. Aminophylline
Inj. Dexamethasone
Inj. Atropine
Inj. Diazapam
Inj. Glucose 5%
Inj. Chlorpromazine

# ANNEXURES

Annexure I

## List of Participants and Resource Persons

1. Prof. B K Khanna
   Principal
   K.G.'s Medical College
   Lucknow

2. Dr A K Agarwal
   Reader
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   K.G.'s Medical College
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   Deptt. of Neurosurgery
   G B Pant Hospital
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4. Dr A K Srivastava
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   Upgraded Department of Social & Preventive Medicine
   K.G.'s Medical College
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5. Dr Baldev Raj
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   MLN Medical College
   Allahabad

6. Dr C R Agarwal
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   PHC - Sarojini Nagar
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Lucknow

3. Dr Dinesh Paul
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NIPCCD
New Delhi

4. Dr (Smt) Neelam Bhatia
Workshop Associate
NIPCCD
New Delhi

Annexure II

## Programme Schedule

**Wednesday, 21 February 1990**

| | | |
|---|---|---|
| 9.00 a.m. - 9.30 a.m. | : | Registration |
| 9.30 a.m. - 10.00 a.m. | : | Opening Session<br>- Dr B K Khanna<br>Principal<br>KGMC, Lucknow |
| 10.00 a.m. - 10.30 a.m. | : | COFFEE BREAK |
| 10.30 a.m. - 1.30 p.m. | : | Chairperson: Dr S N Sinha<br>Prof. Community Medicin<br>Deptt. of Community Medicine<br>JLN Medical College<br>Aligarh |
| | | Review of Morbidity and Mortality Profile of each State and Essential Drugs in Primary Health Care |
| 10.30 a.m. - 11.15 a.m. | : | (i) Uttar Pradesh (West)<br>Dr J V Singh<br>Reader<br>Deptt. of PSM<br>LLRM Medical College<br>Meerut |
| | | Discussion |
| 11.15 a.m. - 12.00 noon | : | (ii) Uttar Pradesh (East)<br>Dr J V Singh<br>Reader<br>Upgraded Deptt. of PSM<br>K G Medical College<br>Lucknow |
| | | Discussion |
| 12.00 noon - 12.45 p.m. | : | (iii) Madhya Pradesh<br>Dr V B Saxena<br>Ex-Prof. & Head<br>Deptt. of PSM<br>JLN Medical College<br>Raipur |
| | | Discussion |

12.45 p.m. - 1.15 p.m. : (iv) A view about Drugs and Medicines to be used in the Rural Health Care Delivery System

Dr S C Tiwari
Reader
Deptt. of PSM
Gandhi Medical College
Bhopal

(v) Drug Supply System in Madhya Pradesh

Dr P W Kavathekar
Joint Director(Health)
Directorate of Health Services
Madhya Pradesh

Discussion

1.30 p.m. - 2.30 p.m. : LUNCH BREAK

2.30 p.m. - 5.30 p.m. : Discussion in Sub-groups on

Group A:

Chairperson: Dr Zeenat Ansari
Professor & Head
Deptt. of Paediatrics
JLN Medical College
Aligarh

Rapporetur: Dr P L Joshi
Reader
Deptt. of SPM
MLN Medical College
Allahabad

(i) Review of list of Essential Drugs for AWW/VHG/Sub-centre/ Primary Health Centre

(ii) Quantity of drugs required for 1000 population

(iii) Proposed Budget for one year.

Group B

Chairperson : Dr Baldev
Prof. & Head
Deptt. of SPM
MLN Medical College
Allahabad

Rapporteur : Dr J V Singh
Reader
Deptt. of SPM
LLRM Medical College
Meerut

(i) Management of drug supply system.

(ii) Follow up action for implementation of recommendations of the workshop in each state.

Thursday, 22 February 1990

| | | |
|---|---|---|
| 9.30 a.m. - 10.30 a.m. | : | Discussion in Sub-groups continued |
| 10.30 a.m. - 11.00 a.m. | : | COFFEE BREAK |
| 11.00 a.m. - 1.00 p.m. | : | Presentation and Finalization of Group Reports |
| 1.00 p.m. - 2.00 p.m. | : | Concluding Session |
| 2.00 p.m. - 3.00 p.m. | : | Disbursement of T.A. |

Annexure III

## List of Kit Material

1. Essential Drugs for Primary Health Care - A Manual for Health Workers in South East Asia.
   - SEARO Regional Health Papers No. 16, WHO. 1988.
2. Health Action, Vol. I, No.8, August - 1988.
3. Essential Drugs in Primary Health Care - A Model List, Indian J. of Paediatrics, Vol. 56, No.1 : 4-5.
4. Health for All - All for Health
   Essential Drugs Save Lives and Money, October. 1988.
5. Health Technology - Directions
   Program for Appropriate Technology in Health - UNICEF, 1988.
6. Fiona Plus - Rational Drug Policy, June 1988, Issue 6.
7. Essential Drugs in Primary Health Care in India - Report of the National Seminar, NIPCCD, 1988.

Annexure IV

## LIST OF ESSENTIAL DRUGS

(Recommendations of National Seminar on Essential Drugs in PHC, 7-8 September 1988, NIPCCD, New Delhi)

I. Essential drugs suggested for the kit of Anganwadi Worker/ Village Health Guide:

1. Vitamin A solution
2. Iron and folic acid tablet
3. ORS packets
4. Chloroquine tablets
5. Paracetamol tablets
6. Mebendazole tablet
7. Chlorpheniramine maleate tablet
8. Mercurochrome powder
9. Gention violet granules
10. Acriflavine powder
11. Borospirit ear drops
12. Terramycin eye ointment
13. Oxyphenonium bromide tablet
14. Benzyl Benzoate emulsion
15. Cotrimoxazole tablet
16. Zinc sulphate eye drops 0.25%
17. Chlorine Tablets (For chlorination of water)

II. Essential drugs at the sub-centre:

A. Drugs suggested for the Anganwadi Worker/Village Health Guide

B. Additional drugs:

1. Aspirin tablets
2. Metoclopramide tablets
3. Contraceptive - Pills
4. Tablet and Injection Methergin
5. Activated charcoal

III. Essential Drugs at the Primary Health Centre:

A. Drugs listed for sub-centre

B. Additional Drugs:

1. Amoxycillin
2. Doxycycline Cap.
3. Chloramphenicol
4. Penicillin (Procaine & Benzathine)
5. Digoxin tablet
6. Propranolol tablet
7. Dihydralazine tablet
8. Isosorbide dinitrate tablet
9. Phenobarbitone tablet
10. Promethazine syrup
11. Glybenclamide tablet
12. Amitriptyline
13. Furazolidine
14. Metronidazole tablet
15. Theophylline tablet
16. Aluminium hydroxide tablet
17. Chlorpromazine tablet
18. B. complex tablet
19. Vitamin D tablet
20. Diazepam tablet
21. Anti-tubercular drugs (available under NTCP)
22. Anti Leprosy drug (available under NLEP)
23. Diethyl - carbamazine tablet
24. Primaquin tab
25. Sulfadoxine+ Pyrimethamine tablet
26. Cap Gynae CVP
27. Isoxsuprine hydrochloride tablet
28. Povidine Iodine vaginal pessary

29. Tab Prednisolone
30. Atropine 1% eye drops
31. Homatropine 2% eye drops
32. Pilocarpine 2% eye drops
33. Hydrocortisone eye ointment
34. Hydrochlorothiazide
35. Antisnake venom
36. Chlorhexidine solution
37. Tincture Iodine
38. Whitfield's ointment
39. Xylocaine 4%, 2% and Jelly
40. Inj. Aminophylline
41. Inj. Adrenaline
42. Inj. Dexamethasone
43. Inj. Chlorpheniramine Maleate
44. I.V. Fluids (Ringer Lactate, 5% Dextrose, 5% Dextrose saline)
45. Inj. Normal saline
46. Inj. Atropine
47. Inj. Potassium chloride
48. Inj. Sodium Bicarbonate
49. Inj. Frusemide
50. Inj. Morphine/Pethidine
51. Inj. Diazepam
52. Inj. Oxytocin
53. Vaccines - DPT, OPV, Measles, BCG, TT, DT and antirabies

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